

HiLCoE

School of Computer Science and Technology

Unix Systems Administration (CS362)

LAB

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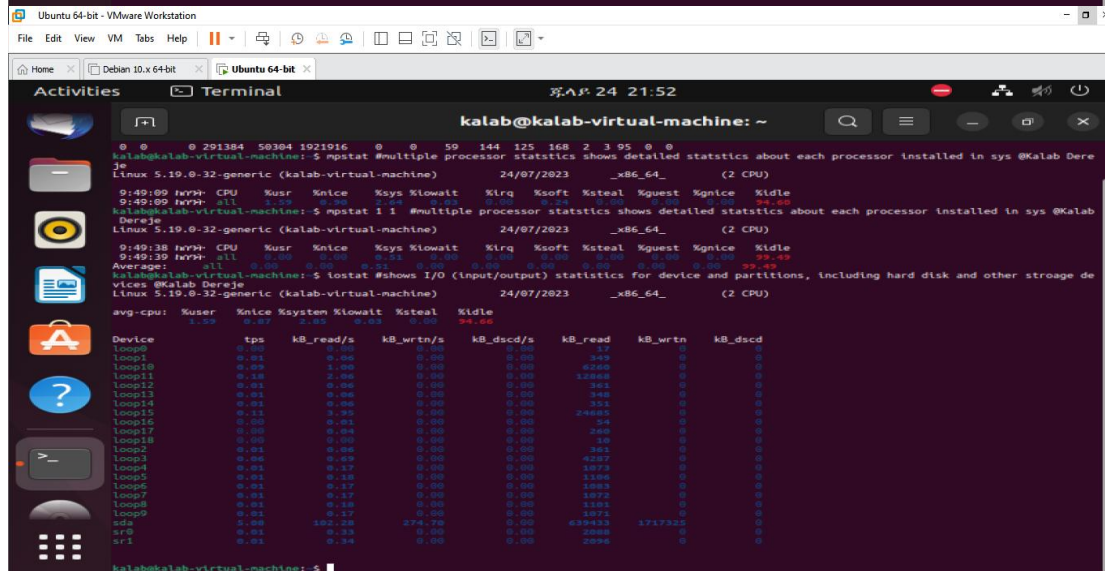
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Section: A

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Ubuntu 64-bit - VMware Workstation
File Edit View VM Tabs Help
Debian 10.x 64-bit Ubuntu 64-bit
Activities Terminal
kalab@kalab-virtual-machine: ~
kalab@kalab-virtual-machine:~$ pmap -x 1675 #shows details about the memory mappings @Kalab Dereje
1675: /usr/bin/gnome-shell
Address      Kbytes      RSS      Dirty Mode Mapping
0000000000000000 1024      80      80 rw--- [ anon ]
0000000000000000 1024      1024    1024 rw--- [ anon ]
0000000000000000 1024      320     320 rw--- [ anon ]
0000000000000000 1024      1024    1024 rw--- [ anon ]
0000000000000000 1024      1012    1012 rw--- [ anon ]
0000000000000000 1024      048     048 rw--- [ anon ]
0000000000000000 1024      1024    1024 rw--- [ anon ]
0000000000000000 116      116     116 r-x-- [ anon ]
0000000000000000 64      0      0 r-x-- [ anon ]
0000000000000000 64      0      0 r-x-- [ anon ]
0000000000000000 64      64      64 r-x-- [ anon ]
0000000000000000 64      0      0 r-x-- [ anon ]
0000000000000000 64      64      64 r-x-- [ anon ]
0000000000000000 64      64      64 r-x-- [ anon ]
0000000000000000 832      4      4 r-x-- [ anon ]
0000000000000000 64      0      0 r-x-- [ anon ]
0000000000000000 64      64      64 r-x-- [ anon ]
0000000000000000 128      0      0 r-x-- [ anon ]
0000000000000000 64      0      0 r-x-- [ anon ]
0000000000000000 64      0      0 r-x-- [ anon ]
0000000000000000 2801008  0      0 r-x-- [ anon ]
0000000000000000 1024      16      16 rw--- [ anon ]
0000000000000000 1024      256     256 rw--- [ anon ]
0000000000000000 1024      752     752 rw--- [ anon ]
0000000000000000 8      0      0 r-x-- gnome-shell
0000000000000000 8      0      0 r-x-- gnome-shell
0000000000000000 4      4      4 r-x-- gnome-shell
0000000000000000 4      4      4 r-x-- gnome-shell
0000000000000000 8      0      0 r-x-- gnome-shell
0000000000000000 93020    80912   80912 rw--- [ anon ]
0000000000000000 65536    24      24 rw-s  memfd:pulseaudio (deleted)
0000000000000000 65536    0      0 rw-s  memfd:pulseaudio (deleted)
0000000000000000 65536    0      0 rw-s  memfd:pulseaudio (deleted)
0000000000000000 65536    828     828 rw-s  memfd:pulseaudio (deleted)
0000000000000000 64768    0      0 r-x-- [ anon ]
0000000000000000 65536    52      52 rw-s  memfd:pulseaudio (deleted)
0000000000000000 364      364     364 rw--- [ anon ]
0000000000000000 65172    0      0 r-x-- [ anon ]
0000000000000000 8192     28      28 rw--- [ anon ]
0000000000000000 4      0      0 r-x-- [ anon ]
```

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kalab@kalab-virtual-machine: ~
0 0 0 201384 50304 1021016 0 0 59 144 125 168 2 3 95 0 0
kalab@kalab-virtual-machine:~$ mpstat #multiple processor statistics shows detailed statistics about each processor installed in sys @Kalab Dereje
Linux 5.19.0-32-generic (kalab-virtual-machine) 24/07/2023 _x86_64_ (2 CPU)
0:49:00 iwrw: CPU Kusr Knice Ksys Kiwait Kirq Ksofft Ksteal Kguest Kgnice Kidle
0:49:00 iwrw: all 0.00 0.00 0.51 0.00 0.00 0.00 0.00 0.00 0.00 99.49
kalab@kalab-virtual-machine:~$ mpstat 1 1 #multiple processor statistics shows detailed statistics about each processor installed in sys @Kalab Dereje
Linux 5.19.0-32-generic (kalab-virtual-machine) 24/07/2023 _x86_64_ (2 CPU)
0:49:38 iwrw: CPU Kusr Knice Ksys Kiwait Kirq Ksofft Ksteal Kguest Kgnice Kidle
0:49:38 iwrw: all 0.00 0.00 0.51 0.00 0.00 0.00 0.00 0.00 0.00 99.49
Averages: all 0.00 0.00 0.51 0.00 0.00 0.00 0.00 0.00 0.00 99.49
kalab@kalab-virtual-machine:~$ iostat #shows I/O (input/output) statistics for device and partitions, including hard disk and other storage devices @Kalab Dereje
Linux 5.19.0-32-generic (kalab-virtual-machine) 24/07/2023 _x86_64_ (2 CPU)
avg-cpu:  Kusr    Knice  Ksystem Kiwait    Ksteal    Kidle
           1.59    0.07    2.05    0.00    0.00    94.66
Device            tps    kB_read/s    kB_wrtn/s    kB_dscd/s    kB_read    kB_wrtn    kB_dscd
loop0              0.01    0.00    0.00    0.00    0.00    0.00    0.00
loop1              0.01    0.00    0.00    0.00    0.00    0.00    0.00
loop10             0.00    0.00    0.00    0.00    0.00    0.00    0.00
loop11             0.18    2.00    0.00    0.00    120000    0.00    0.00
loop12             0.01    0.00    0.00    0.00    0.00    0.00    0.00
loop13             0.01    0.00    0.00    0.00    0.00    0.00    0.00
loop14             0.01    0.00    0.00    0.00    0.00    0.00    0.00
loop15             0.11    3.00    0.00    0.00    20000    0.00    0.00
loop16             0.00    0.00    0.00    0.00    0.00    0.00    0.00
loop17             0.00    0.00    0.00    0.00    0.00    0.00    0.00
loop18             0.00    0.00    0.00    0.00    0.00    0.00    0.00
loop2              0.01    0.00    0.00    0.00    0.00    0.00    0.00
loop3              0.04    0.00    0.00    0.00    0.00    0.00    0.00
loop4              0.01    0.17    0.00    0.00    10772    0.00    0.00
loop5              0.01    0.18    0.00    0.00    11864    0.00    0.00
loop6              0.01    0.17    0.00    0.00    10000    0.00    0.00
loop7              0.01    0.17    0.00    0.00    10772    0.00    0.00
loop8              0.01    0.18    0.00    0.00    11000    0.00    0.00
loop9              0.01    0.17    0.00    0.00    10772    0.00    0.00
sda               100.00    100.00    274.70    0.00    699432    1717305    0.00
sr0               0.00    0.00    0.00    0.00    0.00    0.00    0.00
sr1               0.01    0.34    0.00    0.00    20000    0.00    0.00
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Activities Terminal
kalab@kalab-virtual-machine: ~
kalab@kalab-virtual-machine:~$ pldstat -p 1675 #shows specific processes and their resource utilization using th pld
Linux 5.19.0-32-generic (kalab-virtual-machine) 24/07/2023 _x86_64_ (2 CPU)
10:03:06 iwrw:  UID      PID      Kusr Ksystem Kguest Kwait  KCPU  CPU  Command
10:03:06 iwrw: 1000    1675    0.07  0.00  0.00  0.00  1.00  1  gnome-shell
kalab@kalab-virtual-machine:~$
```



Ubuntu 64-bit - VMware Workstation

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Home Debian 10.x 64-bit Ubuntu 64-bit

Activities Terminal 2024年2月24日 22:45

kalab@kalab-virtual-machine: ~

```
kalab@kalab-virtual-machine:~$ sudo iftop #shows real time network traffic @Kalab Dereje
interface: ens33
IP address is: 192.168.25.120
MAC address is: 00:0c:29:aa:8e:53
kalab@kalab-virtual-machine:~$ ulimit -a #shows current resource limits for the current user
real-time non-blocking time (microseconds, -R) unlimited
core file size (blocks, -C) 0
data seg size (kbytes, -d) unlimited
scheduling priority (-E) 0
file size (blocks, -f) unlimited
pending signals (-l) 15251
max locked memory (kbytes, -l) 407764
max memory size (kbytes, -m) unlimited
open files (-n) 1024
pipe size (512 bytes, -p) 8
POSIX message queues (bytes, -q) 819200
real-time priority (-r) 0
stack size (kbytes, -s) 8192
cpu time (seconds, -t) unlimited
max user processes (-u) 15251
virtual memory (kbytes, -v) unlimited
file locks (-x) unlimited
kalab@kalab-virtual-machine:~$ ulimit -Hn #hard limit that a user can set maximum value for a specific resource
1048576
kalab@kalab-virtual-machine:~$ ulimit -Sn #soft limit is the value that the user can set to but it cannot exceed the hard limit
1024
kalab@kalab-virtual-machine:~$
```

Ubuntu 64-bit - VMware Workstation

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Home Debian 10.x 64-bit Ubuntu 64-bit

Activities Terminal 2024年2月24日 22:57

kalab@kalab-virtual-machine: ~/Desktop

```
kalab@kalab-virtual-machine:~/Desktop$ sysctl -q kernel.hostname #sysctl used to view or modify kernel parameters at runtime this command displays the current value of the kernel hostname
kernel.hostname = kalab-virtual-machine
kalab@kalab-virtual-machine:~/Desktop$ strace -o output.txt ls #strace used for debugging and tracing system calls and signals made by a process
case.sh content.txt ex2.sh example labex.sh lab.txt name.txt test test.txt
cond.sh ex1.sh ex3 lab2 labex.sh.save loop.sh output.txt test2
kalab@kalab-virtual-machine:~/Desktop$ #the above example shows strace of ls command outputed in output.txt
```

